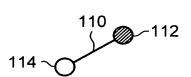
JUL 1 1 2000 E

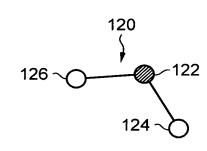
APPLICATION FILING DATE: DECEMBER 6, 1999
TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN

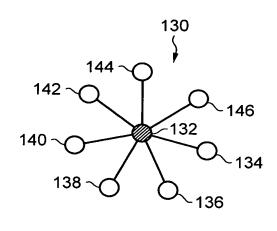
AN AD-HOC NETWORK

INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758

SHEET 1 OF 10







- BLUETOOTH UNIT (MASTER)
- O BLUETOOTH UNIT (SLAVE)

FIG. 1

ACCESS CODE	HEADER	PAYLOAD
----------------	--------	---------

FIG. 3

JUL 1 1 2003 PE

APPLICATION FILING DATE: DECEMBER 6, 1999

TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN

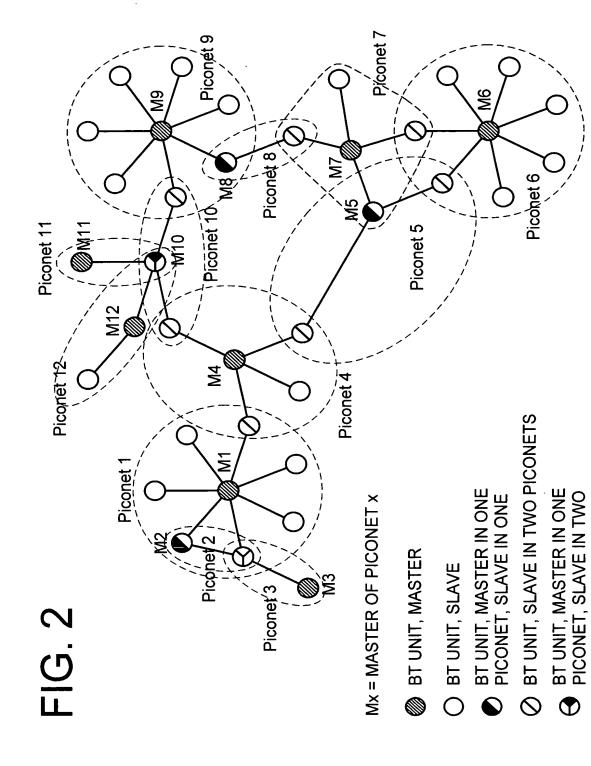
AN AD-HOC NETWORK

INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758

SHEET 2 OF 10

BT UNIT, SLAVE IN THREE PICONETS

**Ø** 



APPLICATION FILING DATE: DECEMBER 6, 1999 TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN AN AD-HOC NETWORK 1 1 2003 INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758 SHEET 3 OF 10 TRAFFIC TO/FROM MASTERS IN OTHER PICONETS (P2-Pnj). S(Pnj) LM S(P3)  $\Gamma$ S(P2) S(P3) LM  ${ }_{\square}$ 

410~

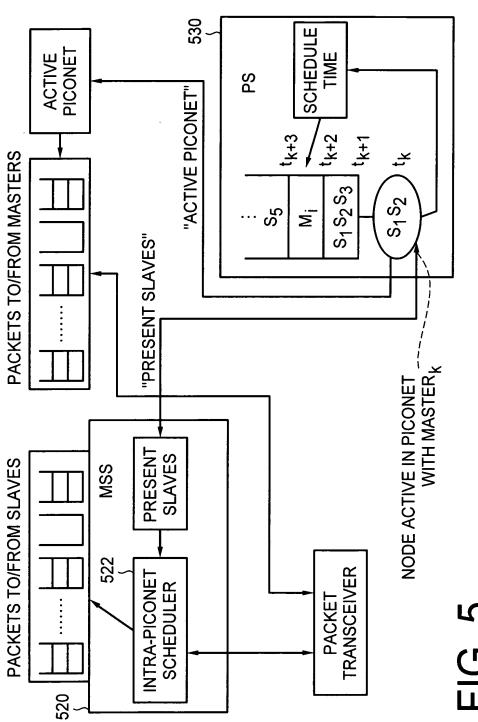
PICONET SCHEDULER (PS) TRAFFIC TO/FROM SLAVES CONTROLLED BY THE MASTER IN THIS PICONET (P1). RF (PHY) S(P2) LM MASTER-SLAVE ပ္ SCHEDULER (MSS) ≥≥ ပ S(P1)<sub>1</sub> 430~ 420 CONTROLLER SCATTERNET SCHEDULER LINK FIG. 4

APPLICATION FILING DATE: DECEMBER 6, 1999
TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN AN AD-HOC NETWORK

INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758

SHEET 4 OF 10







Sxy = SLAVE IN PICONET x WITH id (AM\_ADDR) y

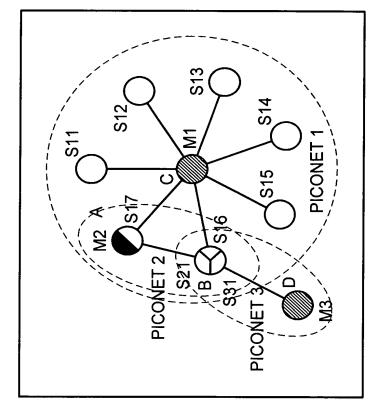
Mx = MASTER OF PICONET x

APPLICATION FILING DATE: DECEMBER 6, 1999

TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN

AN AD-HOC NETWORK
INVENTOR(S): PER JOHANSSON
APPLICATION SERIAL NO.: 09/454,758

SHEET 5 OF 10



**S13** 

₹

PICONET 2

| S21 | B

**S16** 

**S12** 

S

**S14** 

S15

**PICONET** 

SCATTERNET EXAMPLE OF THREE SIMULTANEOUS PICONETS

## SIMULTANEOUS PICO FIG. 6B

SCATTERNET EXAMPLE OF TWO SIMULTANEOUS PICONETS

FIG. 6A

JUL 1 1 2003

APPLICATION FILING DATE: DECEMBER 6, 1999
TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN AN AD-HOC NETWORK

INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758

SHEET 6 OF 10

PS LIST PS p, Tps t <sub>1</sub> , t <sub>a1</sub> t <sub>2</sub> , t <sub>a2</sub>	PS LIST PSp, TpS t1, ta1 t2, ta2	PS LIST PS p, TpS t <sub>1</sub> , t <sub>a1</sub> t <sub>2</sub> , t <sub>a2</sub>
t <sub>2</sub> t <sub>a2</sub> W///////////////////////////////////	t2 ta2  W///////////////////////////////////	T <sub>PS-1</sub>
S17/ M2	S16/S21 $\frac{1}{521}$ $\frac{t_1}{0}$ $\frac{t_3}{1}$ $\frac{1}{1}$ $\frac{t_4}{1}$ $\frac{1}{1}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

JUL 1 1 2003

APPLICATION FILING DATE: DECEMBER 6, 1999
TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN AN AD-HOC NETWORK

INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758

SHEET 7 OF 10

**PSLIST** PS CHANGE REQUEST **PARAMETERS** SNIFF OpCode TRANSACTION ID

FIG. 8A

PS CHANGE REQUEST PARAMETERS OpCode TRANSACTION ID

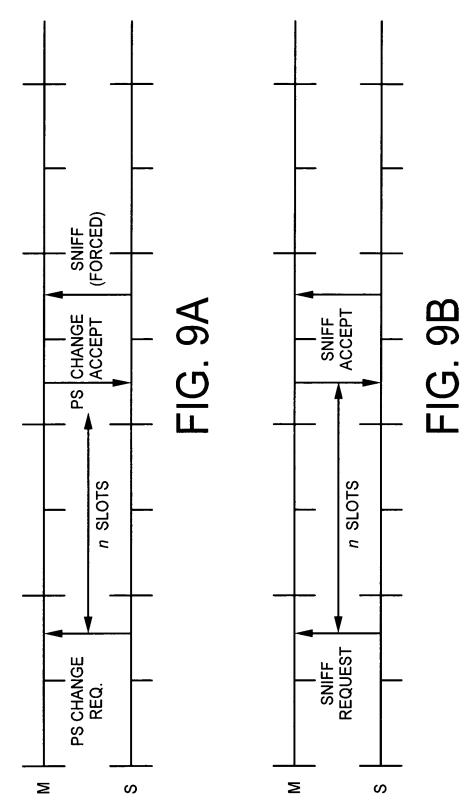
PS LIST

FIG. 8B

JUL 1 1 2003 STENT & TRATE

APPLICATION FILING DATE: DECEMBER 6, 1999
TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN AN AD-HOC NETWORK
INVENTOR(S): PER JOHANSSON
APPLICATION SERIAL NO.: 09/454,758

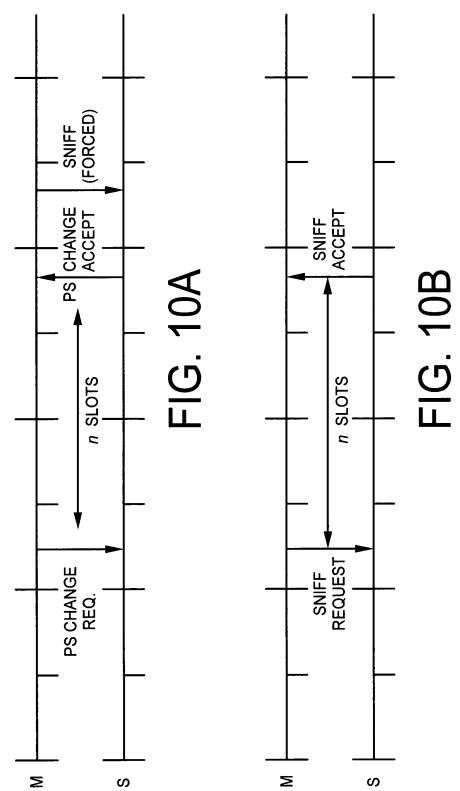
SHEET 8 OF 10



APPLICATION FILING DATE: DECEMBER 6, 1999
TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN

AN AD-HOC NETWORK
INVENTOR(S): PER JOHANSSON
APPLICATION SERIAL NO.: 09/454,758

SHEET 9 OF 10



APPLICATION FILING DATE: DECEMBER 6, 1999 TITLE: SYSTEM AND METHOD FOR SCHEDULING COMMUNICATION SESSIONS IN AN AD-HOC NETWORK INVENTOR(S): PER JOHANSSON APPLICATION SERIAL NO.: 09/454,758 **SHEET 10 OF 10** PSp, Tps PSp, Tps PSp, Tps PSp, Tps PS LIST PS LIST PS LIST PS LIST t2, ta2 t2, ta2 t2, ta2 , t4, ta1 t3, ta3 PS-1 | t4, ta1 TPS-1 | t4, ta1 TpS-1 | t<sub>1</sub>, ta1 TPS-1 PICONET 2 GETS ACTIVE M2-S21 DECREASED! M2-S21 DECREASED! PICONET 2 GETS ACTIVE FIG. 11 M2-S21 3M2-S21 ta2ta2t2 2 PICONET 3
GETS ACTIVE M3-S31 M1-S16 DECREASED! M1-S16 DECREASED! ta2 $t_{a3}$ က္ M1-S16 M1-S16 **PS POINTER PS POINTER** 2 .... ta2ta1 tal tal PSp (t=0) PSp (t=0) 2 S16/ S21 M3Ξ മ